ABSTRACT OF THE DISCLOSURE

A nickel-hydrogen secondary battery comprises a positive electrode (10) and a negative electrode (12) opposite each other with a separator (18) between, and contained in a container (14) with an alkaline electrolyte. The positive electrode (10) contains nickel hydroxide and at least one element selected from a group consisting of Y, Yb, Er, Ca, Sr, Ba, Nb, Ti, W, Mo and Ta. The negative electrode (12) contains a hydrogen-absorbing alloy having composition represented by a general formula $Ln_{1-x}Mg_x(Ni_{1-y}T_y)_z$, where Ln is at least one element selected from a group consisting of the lanthanoids, Ca, Sr, Sc, Y, Ti, Zr and Hf, T is at least one element selected from a group consisting of V, Nb, Ta, Cr, Mo, Mn, Fe, Co, Al, Ga, Zn, Sn, In, Cu, Si, P and B, and x, y and z are numerical values satisfying the requirements $0<x<1$, $0\leq y\leq 0.5$, and $2.5\leq z\leq 4.5$, respectively.